## Mobilising the potentials of a circular economy and of waste and residue biomass as a carbon Figure 22 source for chemicals in Germany

|        | Fossil carbon<br>demand for bas<br>chemicals in 20 | rocycling                                   | Biomas<br>waste<br>resid   | e and carbon dema | ind |
|--------|--|---|----------------------------|-------------------|-----|
| 12     |  |   |                            |                   |     |
| 10 -   |  | 0.7<br>1.8                                  | — Mechanical<br>— Chemical |                   |     |
| 8      |  |   | 2                          | าอรร              |     |
| 6      | 11.4   | Improved collection<br>design for recycling |                            | nused             |     |
| [Mt C] |  |   | biom<br>6.                 | nass Up to 6.3    |     |
| 0 -    |  |   |                            |                   |     |
| -2     |  |   | Energe                     |                   |     |
| -4     |  |   | used bi                    | omass             |     |
| -6     |  |   |                            |                   |     |

Agora Industry and Carbon Minds (2023). Carbon demand based on basic chemicals production in 2019 (VCI 2021). Estimated recycling potential based on a maximum post-consumer-waste-to-product recycling rate of of 35% for mechanical recycling and 40% for chemical recycling according to Agora Industry (2022b); biomass potential based on 2015 data (DFBZ 2019); carbon content of biomass of 50% assumed; average process efficiency of biomass to chemicals of 36% assumed.